

Annual Report.

SESSION 1910-1911.

In submitting the Annual Report for the year ending January 31, 1911, the Council have pleasure in recording that the progress which has hitherto characterized the work of the Institute has been well maintained during session 1910-1911.

MEMBERSHIP.

The membership now stands at 1,228, being a net increase of 53 for the session. It may be remarked that the membership has increased by thirty per cent. during the last five years.

Attention is again called to the omission of notification of change of addresses by members. We have lost touch with several on this account and should the addresses of any of those noted as "wanted" be known to members on the active list, we shall be glad to hear from them.

The transitions during the year are undernoted:—

GRADE.	1910. Roll Jan. 31.	Lapsed.	Trans. from.	Trans. to.	Died.	Re- signed.	Elected.	1911. Roll Jan. 31
Past Presidents (Non-Members)	7	—	—	—	—	—	1	8
Hon. Vice-Presidents	1	—	—	—	—	—	—	1
Hon. Members	1	—	—	—	—	—	—	1
Members	910	30	—	21	12	10	76	955
Companions	74	1	1	2	1	2	—	71
Associate Members ..	66	4	4	1	—	1	3	61
Associates	46	4	2	—	—	—	6	46
Graduates	43	—	—	1	—	1	9	52
Probationary	27	—	18	—	—	—	24	33
Totals	1,175	39	25	25	13	14	119	1,228

OBITUARY.

It is with regret that we record the following removals from the roll by death, and we again tender our sympathy to the bereaved relatives and friends.

John Bramwell (Member).

J. P. Castle (Member).

A. J. Crighton (Member).

J. Hay (Member).

G. T. Hendry (Member).

J. Hewitson (Member).

A. S. Latta (Member).

J. Y. Lowe (Member).

T. MacSweeney (Companion).

J. Pollock (Member).

W. T. Roskelly (Member).

W. W. Wilson (Member).

G. Wiltshire (Member).

Notices of the careers of these deceased members are appended to this report.

ADVISORY COMMITTEE, BOARD OF TRADE.

(Mr. George Shearer, Representative.)

The chief matter of interest to marine engineers considered by this Committee was that concerning the modification of the Regulations in connection with the granting of Second Class Certificates of Competency, especially in relation to apprenticeship. This matter has now been settled, and it is expected that the new rules will be issued shortly. The following matters have also been brought up during the year and are now under consideration :

Efficiency of Deck Hands. Seamen.

Provision Scale of Chinese Seamen.

System of Shipping Fees and Advance Notes at Antwerp.

Absence of Seamen without leave.

Central Indexed Register of Seamen.

ANNUAL DINNER.

(Messrs A. H. Mather and J. McLaren, Joint Conveners.)

A full report of the proceedings at this function was given in the December issue of the Transactions. The members and friends present numbered 320, and at the President's

table, the guests of the Institute, as in former years, were gentlemen widely known as leaders in shipping, commerce and Colonial administration. We are pleased to report that the function, in addition to its value socially, was also a success financially.

AWARDS.

The Denny Gold Medal for session 1909-10 was awarded to Mr. J. Clark (Member) for his paper on "Cylinder Losses and the Adiabatic Expansion of Steam, with and without Superheat," read January 17, 1910.

The Lloyd's Register Scholarship of £50 per annum, tenable for two years, was awarded to Mr. Jas. D. Boyle (Graduate), of Forfar, apprentice engineer with Messrs. Rankin & Blackmore, of Greenock. He is now attending classes at Glasgow University. Mr. F. Duncanson, the other holder of the scholarship, has been making satisfactory progress with his studies.

The Stephen Award to the value of £2, open to the Associate Member section, was gained by Mr. Jas. S. Gander for his essay, "Notes on the Propeller Shaft."

The Ritchie Award to the value of £2, open to the Graduate section, was gained by Mr. C. V. Lewis for his essay on "The Steam Engine Condenser." Prizes to the value of 30s. and 10s. were gained by Mr. Robert Riddell (Graduate) and Mr. Walter Smith (Graduate) respectively, for essays on the same subject.

The Open Competition Award to the value of £2 2s., presented by Mr. Robert Clark (Companion), and open to Graduates of the Institute and Apprentice Engineers, was awarded to Mr. Geo. Turner, of Monkseaton, Northumberland, who is serving with Messrs. R. & W. Hawthorn, Leslie & Co., Ltd., Newcastle-on-Tyne.

BOARD OF TRADE REGULATIONS.

In the August issue of the Transactions copy was given of correspondence with the Board of Trade in relation to the proposals to increase the foreign sea-going service for first and second-class Engineers' Certificates of Competency, from one year to eighteen months; and, further, that the Board might recognize as equivalent to sea service, a period not greater than one-sixth of the total period of sea service required, provided it was spent at an approved technical school within two years of the date of examination. The matter was considered very

fully by a Committee of the Council and the replies sent in accordance with the decisions arrived at. The whole subject is receiving the consideration of the Board of Trade. The question of certificates necessary for internal combustion engines has also received consideration.

BOHEMIAN CONCERTS.

The popularity of these social evenings has again been attested by the large attendances, the accommodation of the lecture hall having been overtaxed on several of the occasions. Concerts were held on the following dates, the programme and refreshments being provided by those on whose invitation they were given :

February 18, 1910.	Mr. and Mrs. Geo. Adams.
October 14, 1910.	The Junior Section.
November 18, 1910.	Mr. and Mrs. Jas. Adamson.
December 16, 1910.	Mr. and Mrs. N. K. MacLean.
January 20, 1911.	The Institute Lawn Tennis Club.

BRITISH ENGINEERING STANDARDS COMMITTEE.

In connexion with the British Engineering Standards Committee, Mr. W. J. Pratten, jun., was appointed as a Representative of the Institute on the Sectional Committee for screw threads and limit gauges. Mr. Pratten's colleague, as representative of the Institute on this Committee, is Mr. D. Hulme.

CITY PREMISES COMMITTEE.

(Chairman : Mr. Robt. Leslie, R.N.R. ; Vice-President.)

In accordance with the recommendations of the Committee adopted at the last Annual General Meeting, a Special Fund has been opened for the purpose of acquiring City Premises. A strong and influential General Committee, representative of the entire membership, has been formed, and at a well attended meeting of the Committee, held in the Liverpool Street Hotel in July last, an Executive Committee was appointed to draw up and issue a circular and to carry out the necessary

details for the furtherance of the scheme. The Executive Committee appointed were as follows :

Chairman : Mr. Robert Leslie, R.N.R. (Vice-President).
 Deputy Chairman : Mr. J. T. Milton (Chairman of Council).
 Honorary Treasurer : Mr. Joseph Hallett.
 Honorary Secretary : Mr. A. H. Mather.
 Members of Committee : Messrs. George Adams, Joseph Blackett, A. Boyle, P. T. Campbell and John McLaren.

After full consideration a circular was drawn up, pointing out the necessity for premises in the City, stating that the sum of from £15,000 to £20,000 would be required, and asking the co-operation of members, and of marine engine builders, shipbuilders, ship-owners and others, in obtaining this amount. A copy of the circular has been posted to each member, and it is hoped that, recognising the importance of this step in strengthening the influence, raising the status and extending the usefulness of the Institute, they will make a liberal response. Copies of the circular have also been sent to each of the principal firms in the country interested in the shipping and marine engineering industries.

The Committee are gratified at the measure of success which has already attended the issue of the circular, and at an early date will publish a list of the donations received.

Cheques should be made payable to "The Institute of Marine Engineers," and crossed "City Premises Fund."

The following is a copy of the circular issued by the Committee :—

DEAR SIR,—

It has long been considered desirable that the Institute should possess a building in the City of London, and this has now become a necessity to enable the Institute to increase its usefulness. It is felt that the Stratford Building has become inadequate for the work, and the great increase in the membership which has taken place during recent years decided the Council to appoint a representative Committee to investigate fully the question of obtaining premises more readily accessible by members from all parts, and also available for business and social purposes in addition to the technical work for which the Institute was primarily founded. Last session the Institute attained the twenty-first year of its existence, and this appeared to be an appropriate period for inaugurating such a scheme.

The special Committee, after careful consideration, arrived at the conclusion that premises in a central part of the City should either be built or purchased. Extensive inquiries were made into the probable

cost, and these indicate that a sum of £15,000, to £20,000 will be required to carry out the proposal in an adequate manner.

The Committee feel assured that they will receive the hearty cooperation of the Members of the Institute in this effort, and they also feel confident that Marine Engine Builders, Ship Builders, Ship Owners and others interested in the welfare of the Marine Engineer, will be pleased to have this opportunity of showing, by their financial support, their appreciation of the good work already done by the Institute in the interests not only of the profession of Marine Engineering but of the whole Shipping World.

The Committee will gratefully receive whatever amount you may be inclined to contribute. Any sum, however small, will be welcomed, so that all interested may feel that they have taken part in the furtherance of the scheme. Donations may be made in any convenient way, either by one payment or by subscriptions spread over a period. A separate account has been opened at the London County & Westminster Bank, Stratford Branch. Cheques and Orders should be made payable to the Institute of Marine Engineers and crossed "City Premises Fund."

On behalf of the City Premises Committee,

We remain, Dear Sir,

Yours faithfully,

JOSEPH HALLETT,
Hon. Treasurer.

ALEX. H. MATHER.
Hon. Secretary.

COUNCIL OF THE INSTITUTE.

In accordance with the new By-laws passed at the last Annual Meeting, the number of ordinary Members of Council was increased to fifteen, the right being vested in the Council of selecting two from amongst their own number to act as Hon. Minute Secretary and Hon. Financial Secretary. The new By-laws also provide that five Members of Council, being those who have been longest in office, shall retire at each Annual Meeting and shall not be eligible for re-election for one year. In order to facilitate the working of this arrangement, Messrs. J. G. Hawthorn and E. W. Ross have been included among the ordinary Members of Council, and this year the retiring Members of Council will be Messrs. John Clark, J. G. Hawthorn, D. Hulme, J. McLaren and W. I. Taylor.

The meetings of Council have been held, during the past session, in the Liverpool Street Hotel, E.C., at 7 p.m., as this has been found to be of greater convenience to the majority of the members.

EXHIBITIONS.

Turin Exhibition.—The arrangements for the Turin Exhibition are well advanced, and members who propose either to exhibit or attend at the exhibition are invited to communicate with the Institute.

Coronation Exhibition, Shepherd's Bush.—The Institute is represented on the Committee in connexion with the Exhibition to be held at Shepherd's Bush during the summer months.

EXPERIMENTAL DEPARTMENT.

(Messrs. K. C. Bales and J. Clark, Conveners.)

Fuel tests have been conducted and the calorific values obtained of samples submitted by the members, on evenings set apart for the purpose. Members are invited to submit special samples for testing. Should any of the members be desirous of witnessing a test, the conveners would be willing to conduct it on a suitable evening, which might be arranged.

JUNIOR SECTION.

(Messrs. J. G. Hawthorn and J. Lang, R.N.R., Conveners.)

This section is steadily increasing in numbers, and it is hoped that with this increase more advantage will be taken of the opportunity of acquiring a thorough knowledge of special subjects, to the study of which the essay competitions, promoted especially for the section, are an incentive. It is gratifying to note the interest displayed by the Junior members in the ordinary meetings of the Institute. During the session a Bohemian Concert was given on the invitation of the Junior Section; and on December 30 a Social Evening and Dance was promoted for their benefit on the invitation of the Conveners, Messrs. Hawthorn and Lang. These gatherings were very well attended and successful in every respect. On December 12 a lecture on "The Steam Engine Indicator" was given by Mr. Hawthorn, and proved of great interest to the members of the Section present. During the summer visits were paid to several places of interest.

LAWN TENNIS CLUB.

(Mr. J. F. Redman, Hon. Secretary.)

The membership during 1910 consisted of twenty ladies and twelve gentlemen. Owing to wet weather only a limited

use was made of the courts. An outing was arranged to Herongate on three occasions which resulted in a loss to the club owing to the weather not being favourable. Two Social Evenings were held at the Institute and one at the Alexandra Hotel, Stratford. These socials were well supported by members and friends. Miss T. Redman won the racquet kindly offered by Mr. J. Adamson for the Ladies Tournament. The following is a statement of the income and expenditure for the season :—

INCOME.			EXPENDITURE.		
	£	s. d.		£	s. d.
Brought forward . . .	1	5 6	Cutting and rolling grass . . .	3	5 0
12 entrance fees at 2s. 6d. . .	1	10 0	General expenses . . .	6	6 3
26 subscriptions at 7s. 6d. . .	9	15 0	Postage and stationery . . .	0	7 1
6 subscriptions at 10s. 6d. . .	3	3 0	Outing	1	11 8
Sundry cash	1	8 0	Concert	2	10 10
Socials	12	15 0	Socials	12	3 11
Outings	0	12 6	Gratuities to caretaker . . .	1	2 6
Contributions towards Ex-			Cash balance in hand . . .	4	0 8
penses of concert	0	19 0			
	<u>£31</u>	<u>8 0</u>		<u>£31</u>	<u>8 0</u>

LIBRARY.

Donations to the Library Fund have been received from the following members during the session :

	£	s. d.
Mr. P. J. Adie, Buenos Ayres	2	2 6
Mr. Geo. Bodley, South Shields	1	0 0
Mr. J. M. Brown, Birkenhead	2	2 0
Mr. J. Foden Cook, Dublin	1	10 0
Mr. John McKay, Liverpool	1	1 0
Mr. F. McNair, Liverpool	0	10 6
Mr. A. Robertson, Calcutta	2	0 0
Mr. J. H. Stewart, Shanghai	1	1 0
Mr. Stalio Luigi	1	19 0

In addition to these donations in money, the following members have presented volumes :

- Mr. F. V. Catt, *Modern Engines and Power Generators*, 4 vols.
 Mr. H. O. Deacon, *Pocket Book of Refrigeration*.
 Sir A. J. Durston, K.C.B., 9 vols. *Transactions Institution of Engineers and Shipbuilders in Scotland*, Nos. 41, 43 to 46, 48 to 51 inclusive.
 Mr. J. E. Elmslie, *Text Book of Naval Architecture*.

- Mr. John Gravell, *Internal Combustion Engines*.
 Mr. Chas. F. Holt, *The Analysis of Oils and Allied Substances*, and *The Shipbuilding Industry of Germany*.
 Mr. Reginald L. G. Johnson, *Know your own Ship*.
 Mr. John Lockie, *Annual Report of the Smithsonian Institution*.
 Mr. A. J. Maginnis, *The Advance of Marine Engineering in the Early Twentieth Century*.
 Mr. Edwin L. Orde, *Resistance and Propulsion of Ships*, and *Marine Propellers*.
 Mr. W. H. Trotman, *Machinery for Refrigeration*.

A list is given on succeeding pages of further additions to the library from outside sources and by purchase. We would take this opportunity of again thanking these gentlemen for their valuable donations, both in money and in books. The bookcases are now left unlocked so as to facilitate the use of the library by members for casual reference. Books are also lent to members on application.

PAPERS AND LECTURES.

(Mr. A. E. Battle, Convener.)

The following is a list of the papers and lectures read before the Institute during the session :

- 1910
- Feb. 21. The Application of Oxy-Acetylene Welding to the Repair of Marine Boilers and Hulls. By Mr. Leonard M. Fox (Member).
 Mar. 21. An Improved Electrical Apparatus for Warping, Winding, Hoisting, etc., on board ship. By Mr. Jas. A. Liddle, F.R.S.A. (Member).
 April 4. The Stability of Ships. By Mr. Edwin Tate.
 Sept. 17. Electro-Magnetic Transmission for Main Marine Propulsion. By Mr. Jules Lecoche (Member).
 Sept. 17. The Telemotor. By Mr. W. G. Gibbons (Member).
 Sept. 17. The Internal Combustion Engine. By Mr. W. P. Durtnall.
 June 18. Internal Combustion Engines for Marine Use. By Mr. W. R. Cummins (Member).
 June 18. An Experimental Study of an Oil Engine. By Mr. F. J. Kean, B.Sc. (Member).
 Oct. 3. The G. M. Balance or Stability Indicator for Ships, with demonstration. By Mr. C. Fredericks.
 Oct. 31. Presidential Address by Sir David Gill, K.C.B.
 Nov. 21. The Steam Engine Indicator and its Diagrams. By Mr. W. G. Winterburn (Member).
 Dec. 5. Notes on Salving a Gold Dredge. By Mr. F. G. Butt (Member).
 Dec. 12. The Uses of Indicator Diagrams. By Mr. J. G. Hawthorn.
 Dec. 17. The History and Practice of Lubrication in Marine Engines. By Mr. J. Veitch Wilson.
- 1911.
- Jan. 16. Causes of Deterioration in Boilers, and Measures tending to prevent or remedy them. By Mr. C. C. Nelson (Member).

The subjects treated have been numerous and have covered

a wide ground. It is to be noted, however, that in addition to subjects of practical interest to all marine engineers, the important developments of the internal combustion engine as applied to marine conditions have received a large share of attention. Members are invited to contribute to the Transactions for publication, short accounts of breakdowns, or on other matters which they consider may be of general interest.

PRESS CUTTINGS.

(Mr. Geo. Adams, Convener.)

A book is provided for cuttings from the technical press which are of exceptional interest and likely to be of value for purposes of reference. Contributions are invited from members who come across matters which they consider deserving of being kept as a permanent record or for consulting by those who may have papers to write and subjects to discuss.

PROPERTY.

(Mr. J. H. Silley, Convener.)

Renovations were made to a considerable extent during the session, and the premises are now in thorough repair. There have been several additions to the property, a list of which is given on succeeding pages, and this opportunity is taken of according the thanks of the Council to those gentlemen who have made presentations to this department.

READING ROOM.

As will be seen from the list given, the Reading Room is well supplied with engineering and shipping journals and magazines. As these accumulate in course of time, members may have copies of the back numbers on application free of charge, with the exception of *The Engineer*, *Engineering* and *Punch*, which are bound and placed in the Institute library. During the year large parcels containing copies of *The Graphic*, *The Illustrated London News* and similar journals were distributed to the following Institutions :

The London Hospital.

The West Ham Hospital.

The Royal Merchant Seamen's Orphanage.

The Royal National Mission to Seamen.

The Wanstead Infant Orphan Asylum.

SANITARY CONGRESS.

The Sanitary Congress is to meet at Belfast in July, 1911, and an invitation to appoint a Representative has been accepted on behalf of the Institute. A member resident near Belfast will be appointed.

TRANSACTIONS.

(Mr. J. E. Elmslie, Convener.)

The issue of the Transactions in monthly parts having given great satisfaction since this mode of issue was adopted in 1906, this may now be looked upon as the established practice of the Institute. As has been pointed out in previous reports, not only is it a convenient means of keeping members acquainted with the dates of papers to be read, visits to works, etc., but it has also the very great advantage of keeping the members, who are spread far and wide, in constant touch with the Institute. The interest of those who, from the necessities of their services, can seldom or never attend a meeting, is hardly kept at the proper temperature by irregular communications.

Included in the Transactions as proposed at last Annual Meeting, papers read at other Societies of special interest will be found, permission having been obtained to reprint them from the Authorities to whom we are indebted. These are "The Steam Turbine," by the Hon. C. A. Parsons (Past President) and "Causes of Deterioration in Boilers," by Mr. C. C. Nelson (Member). The former paper was read before the Institution of Naval Architects and the latter before the Institution of Engineers and Shipbuilders, Hong-Kong.

It may be convenient to remind members who may be at sea or in distant parts that, though they are unable to attend meetings, it is always open to them to send written communications on the papers that reach them. In this way much valuable and practical information can be added to the Transactions, to the benefit of the whole membership. There having accumulated in the course of years a considerable number of copies of back papers, it was decided by the Council, in consequence of the large amount of stowage required, to supply copies of back papers to those who applied for them. A notice to that effect having been put on the cover of the Transactions and taken advantage of to some extent has reduced the stock to more manageable dimensions. Such back numbers as now

remain in stock can be had on application at a small charge.

The following papers being out of print and having been applied for for binding purposes, any members who may have spare copies are invited to return them to the Institute.

AUTHOR.	TITLE.	DATE.	VOL.	No.
G. W. Manuel	Shafting	May 27, 1889	1	II.
R. Bruce	Radial Valve Gear	Sept. 24, 1889	1	IV.
F. W. Wymer	Bilge Pumps and their Connexions	Oct. 11, 1889	1	V.
Jos. Williams	Forced Draught	Oct. 19, 1889	1	VI.
J. D. Churchill	Marine Governors	Nov. 18, 1889	1	VIII.
J. G. Hawthorn	The Marine Engine considered as a Machine	Jan. 13, 1890	1	IX.
A. Sommerville	Ventilation of Engine Rooms and Stokeholds	Feb., 1890	1	X.
G. W. Buckwell	The Influence of Weather on Paddle Engines	April 15, 1890	2	XIV.
Jos. Thomas	The New Entrance Works, Royal Albert Docks	April 15, 1890	2	XV.
J. D. Churchill	The Marine Engine Governor ..	April 29, 1890	2	XVI.
R. E. Crompton	Electrical Engineering, Parts 1 and 2	May 6, 1890	2	XVII.
James Adamson	Technical Education	Oct. 24, 1904	16	CXVIII.
Jos. Feil	A Trip to New Zealand	Nov. 7, 1904	16	LECTURE
R. B. Lyddon	Fuel Economy by Insulation ..	Dec. 12, 1904	16	CXIX.
John McLaren	The Extended Uses of Electricity on Board Ship	Sept. 4, 1909	21	CLVII.
H. Ruck-Keene	The Treatment of Marine Boilers on Long Voyages	Sept. 4, 1909	21	CLVIII.

Eighty volumes of the Transactions were bound ; of which sixty-five were disposed of or presented as exchanges to kindred Institutions, Societies, Colleges, etc., and, on payment of the cost of binding (3/6) to members, the remaining fifteen being still in stock. Revised estimates were received for the printing of the Transactions, and this is now being done at a greatly reduced price, although it naturally, and to some extent, advisably, forms a heavy item of expense. The total cost remains almost the same as for last session, but represents an increased output. The cost is reduced by the amount received for advertisements. The Council would be glad to receive a larger amount from this source of revenue, and commend the subject to the consideration of members.

VISITS TO WORKS, ETC.

Visits to the following were paid during the session :

April 16.	The London Coliseum, Charing Cross, W.
May 28.	St. Bartholomew's Hospital.
June 11.	Central London Railway Power Station

- June 25. Japan-British Exhibition, Shepherd's Bush.
 Sept. 17. Naval, Mercantile, Marine and Engineering Exhibition, Olympia, W.
 Oct. 21. The Dermatine Co. Ltd., Camberwell, S.W.
 Oct. 29. Fraser & Fraser, Ltd., Bow (Demonstrations with the Grille Boiler and Dalmar Tube Cleaner).
 Dec. 10. Warehouses of the Port of London Authority, London Docks, E.

Reports of these visits duly appeared in the Transactions. Papers by Messrs. W. R. Cummins (Member) and F. J. Kean, B.Sc. (Member) were read on the occasion of the visit to the Japan-British Exhibition, when Sir William Hall-Jones, K.C.M.G. (High Commissioner for New Zealand) presided. A large number of members and friends were present at the Conference at the Naval, Mercantile, Marine and Engineering Exhibition at Olympia. Refreshments were very kindly provided on the invitation of the Exhibition authorities, and at the ensuing meeting, presided over by Sir David Gill, K.C.B., who was also President of the Exhibition Council, papers by Messrs. W. G. Gibbons (Member), Jules Lecoche (Member) and W. P. Durtnall (Member) were read.

Visits are now in course of arrangement for the summer months and will be advertised as usual on the cover of the Transactions. The attention of members is specially directed to the notices of the meetings of the Institute on the back cover, also to the desirability of keeping in close touch with the Institute in respect to their changes of locality so that communications may reach them as promptly as possible, and to the advisability of prompt payment of subscriptions to avoid arrears, which tend to hamper the work of the Institute.

In order to warn members who may be forgetful of their duty in respect to their subscriptions it is proposed to omit sending papers to those who may be a second year in arrear. At present there are about seventy in arrears with their payments.

The Council look forward to the co-operation of the members during the coming session, either by contributions of papers or to the discussions, attendance at the meetings whenever possible, or in any other way in which the value of the Institute may be promoted for the general good.

On behalf of the Council,

JAS. ADAMSON,
Hon. Secretary.

OBITUARY.

Mr. JOHN BRAMWELL (Member), who was very well known in the district of Westhoughton, near Bolton, was reported in February, 1910, as drowned in Porpoise Bay, Scheldt, British Columbia, being at the time chief engineer on the s.s. *New Era*. Mr. Bramwell, who had an eventful career, started work as a collier boy. He was afterwards with the Westhoughton Coal & Canal Company as foreman mechanic, where his engineering skill was made apparent. He subsequently took up a position at Fleetwood; then went to sea as third engineer, working through the grades to chief engineer. In September, 1908, he was shipwrecked on the s.s. *Rosella*. Mr. Bramwell worked out a design for controlling the engines from the bridge, and presented the Institute with a model of his patent on becoming a member in December 1907.

Mr. JOHN PHILPOT CASTLE (Member) was born January 9, 1859, at Rochester, Kent. He served his apprenticeship as an engineer in H. M. Dockyard, Chatham. His first voyage to sea was in June 1881, when he sailed as third engineer. Subsequently he obtained his 1st-class certificate, and in 1895, at the time of his election as a Member of the Institute, he was chief engineer of the s.s. *Pondo*. He was for some years employed in Messrs. Bucknall Bros.' Cape Line Steamers, and during his latter years, with the Bedouin Steam Navigation Company of Liverpool. He died on June 9, 1910, leaving a widow, but no family.

Mr. A. J. CRIGHTON (Member), partner in the firm of Messrs. Béliard, Crighton & Co., of Antwerp, died on April 16, 1910. Some three years before his death Mr. Crighton was examining the after part of a steamer afloat in the Docks at Antwerp, from a punt, when he overbalanced himself and fell into the water. The shock to his system was severe, and especially to his heart, which was strained almost to rupture, so that he suffered much until his death. He was an engineer well known to a large circle on the Continent and elsewhere, both on account of his own personality and that of his father, a record of whose thoughtful liberality stands in the Reading Room at Antwerp. Mr. Crighton was born in Birkenhead in 1867, educated at Dollar Academy, and served his apprenticeship with Messrs. D. Rowan & Son, and Hutson & Co., Glasgow. During the last

years of his sea service he was in the Red Star line of steamers, and obtained his Chief Engineer's Certificate in 1893. He was Chief Engineer of the Red Star liner *Berlin* when bought by the United States Government for transport service during the Spanish-American war. At the termination of this service he joined Mr. Béliard as co-manager in the Vulcain Belge, Antwerp, and his personal and business qualities made him well-known and esteemed. About 1903-4 the firm of Messrs. Béliard, Crichton & Co. was formed, and by energy and close attention to the demands of work, the firm prospered. Mr. Crichton became a Member of the Institute in May, 1909.

Mr. JOHN HAY (Member) was associated with the Institute since January 1900. He served his apprenticeship with Messrs. Jas. Howden & Co., Ltd., Glasgow, and in 1889 started his sea-going career as third engineer of the s.s. *Teviotdale*. In August, 1892, he was appointed Chief Engineer of the s.s. *Magnetic*, which vessel he subsequently left to join the s.s. *Amaranth* in September, 1893, where he remained until March 1896. He joined Messrs. Frank C. Strick & Co., Ltd., as Chief Engineer of one of their steamers in 1897, and received a shore appointment in 1899 to assist in the superintending of their fleet, in which capacity he was serving until his death. By all who knew him he was most highly esteemed, and was looked upon as one of the rising men in his profession. He was born in Glasgow in 1870, and died in London on April 11, 1910.

Mr. G. R. T. HENDY (Member) was elected a member in June, 1906. He served his apprenticeship with Messrs. Denny & Co., of Dumbarton, after which he completed fourteen years' sea service. He was a second engineer in the employment of Messrs. The British India Steam Navigation Co., and met his death in the ss. *Loodiana*, which was lost in a cyclone in January 1910.

Mr. J. HEWITSON (Member) was elected in December, 1903. He was for a period of ten years at sea, and for some years afterwards was outdoor manager and chargeman for several firms in Cardiff. Some twelve years ago he was selected by the Borough of Shoreditch, to take up the position of Superintendent and Engineer over the Baths and Washhouses. When it was decided, in 1905, to build other Baths and Washhouses at Haggerston, he was deputed to get out the specifica-

tion for all engineering work, also the deep well pump, at these baths and was made responsible for the same. In 1908 he was appointed Chief Superintending Engineer over the extended Baths and Wash-houses, and through his efforts a large saving per annum was effected. He died in September, 1910.

Mr. ALEXANDER S. LATTA (Member), who was elected in April, 1907, joined the service of the British India S. N. Co. shortly after serving his apprenticeship with Messrs. Denny & Company, Dumbarton. Later he became associated with Messrs. Jardine, Matheson & Co. (Indo-China Co.), in which firm he rose through the various grades until he became Chief Engineer. He died on board the s.s. *Kut Sang*, the Commodore ship of the line, on a voyage from Hong-Kong to Shanghai, at the early age of thirty-nine. His death was very sudden and unexpected. His service with the Indo-China Co. dated back to 1894. He was very highly respected in the East, where he was well known from Calcutta to Shanghai. He left a widow and daughter in Dumbarton and many sorrowing friends to mourn his loss.

Mr. JAS. Y. LOWE (Member) died on February 22, 1910, at the age of fifty-eight, an event which caused keen regret to the large number of old shipmates and many friends to whom he had endeared himself by the exercise of his good qualities of heart and mind. His father held an official position in the town of Dumbarton, where Mr. Lowe was brought up, attending school there with considerable credit at the Burgh Academy and serving his apprenticeship with Messrs. Denny & Co. He joined the British India Co. in October, 1874, and after serving in the various grades to Chief Engineer on the Indian Coast, he was transferred to the home line, and served as Chief Engineer in the *Navarino*, *Rewa* and *Golconda*, joining the latter steamer in November, 1890. He made his last voyage in 1909, at the termination of which, although apparently well on arrival, he was suddenly seized by illness, which rendered it necessary for him to seek rest and medical treatment, with relief from duty. Finding subsequently that he would be unable to resume duty, he retired on a pension granted by the Company, in whose service he had been for over thirty years. While serving as a junior engineer in India, Mr. Lowe fell with a shipmate from the rail of a steamer into the bottom of the dry

dock at Bombay, sustaining severe injuries, the effects of which remained with him to the end. Mr. Lowe was one of the early and deeply-interested Members of the Institute, and was elected a Vice-President in 1909. He died at Biddenham, near Bedford, and the funeral service was held in Biddenham Church on February 25, in the graveyard of which his mortal remains were interred, while his memory will long linger amid many circles far and near. Mr. Lowe, being a Vice-President, his photograph with obituary notice appeared in the April issue of the Transactions.

Mr. T. MACSWEENEY (Companion), elected in October, 1908, was born in 1858 in the town of Ballyvourney, Co. Cork, where he was educated. Coming to England as a young man, he was successful in business and obtained a position of trust and independence. He was associated, during the latter part of his career, with the firm of Messrs. W.B. Dick & Co., Oil Refiners, and was well known and greatly respected by the many engineers in London with whom he came in contact. He was very prominent in religious and charitable work among the Roman Catholic community. During his career he acted as secretary to various Irish Literary Societies and political organizations. He was a contributor to the Press and had a gift for verse-making, producing several excellent translations of many Anglo-Irish songs. After a few months' illness he died on May 8, 1910, and was interred in St. Patrick's cemetery, Leytonstone, the hundreds who thronged round the grave testifying to the intense respect and esteem in which he was held.

Mr. JAMES POLLOCK (Member), of 3, Lloyd's Avenue, was born in June, 1838. He served his apprenticeship with Messrs. J. & A. Blyth, Marine and General Engineers, London, and in 1859 left England for the Amur River, Eastern Siberia, where he was engaged in erecting and running river and coasting steamers. He returned to London in 1863, from that time to 1871 being engaged in various services at home and abroad connected with vessels and machinery constructed by Messrs. J. & W. Dudgeon, Engineers and Shipbuilders, of London, his experience including blockade running during the American Civil War; the Italian Mail service between Genoa and the River Plate; fitting up machinery for the Portuguese Government in Lisbon; navigation of the River Duna, in Poland;

North-Sea Service between London and Sweden, etc. From 1871 to 1873 he was Engineer to Messrs. Lewis & Stockwell, Blackwall Point, London, and from 1873 to 1875 Designer to Messrs. J. & A. Blyth, London. In 1875 he commenced practice as a Consulting Engineer and Naval Architect at 13, Great Tower Street, London, E. C., and became a Member of the Institute in 1894. In 1901 the business was converted into a private company under the style of James Pollock & Co. Ltd., with the late Mr. Pollock as Chairman and Managing Director, four of his sons being also Directors. Civil Engineering and machinery Export Departments were added, and in addition to being Consulting Engineers to the Amazon Steam Navigation Co. Ltd., C. Howard & Sons, Thames Steam Tug and Lighterage Co. Ltd., etc., and designing hulls and machinery for vessels up to 7,500 tons, the firm represent some of the largest Eastern and Australian engineering firms. On the Civil Engineering side they have arranged and carried out contracts for important railway and public works in the East, in Africa and in South America. In all these the late Mr. Pollock took an active part until August 1909, when he was taken ill. He never recovered, but passed peacefully away on February 23, 1910.

Mr. W. T. ROSKELLY (Member), was a Member of long standing, having been elected in February, 1894. He was born at Hayle, Cornwall, in 1856, being the son of Captain Tom Roskelly, a well-known personage in that town. He served his apprenticeship with Messrs. Harvey & Co., of Hayle. He afterwards went to Southampton and entered the service of the Royal Mail Steam Packet Co., serving for some time in the West Indies. He was then appointed guarantee chief engineer for Messrs. Oswald Mordaunt & Co. of Woolston, Southampton, and, on the failure of the firm, joined the Union S.S. Co. as 2nd engineer in 1888, being promoted to Chief Engineer after eight years service. He remained in the Company until March 14, 1910, when he met his death by drowning. In addition to the usual certificates he possessed an Extra Chief Engineer's certificate and also an Italian Chief's Engineer's certificate which he obtained on passing an examination in Genoa.

Mr. GEORGE WILTSHIRE (Member) was born at Market

Lavington, Wilts., in 1850, and at the age of fifteen was apprenticed at Oxley's Engineering Works, Frome. On completing his apprenticeship he came to London and obtained employment as an Engineer, previous to serving in the same capacity at sea. In 1874, he joined the staff of the Thames Ironworks' Shipbuilding & Engineering Co., Ltd., and in the course of time became Managing Engineer of the Marine Engineering & Dry Dock Departments, which position he occupied until 1892, when he resigned on being appointed sole London representative of Messrs. Turner Bros., Ltd., Engineers & Asbestos Manufacturers, of Rochdale, in whose service he continued until the time of his death. He was elected a Member in 1889, and in the same year became a Member of the Institution of Naval Architects.

Mr. W. W. WILSON (Member), the intimation of whose death on January 25, 1911, was received with much regret, became associated with the Institute in May, 1889, shortly after its foundation. At the time of his death, at the age of sixty-two, he was Superintendent Inspecting Engineer of the P. & O. Company at Greenock. Mr. Wilson was well known to engineers sailing out of the Port of London while acting as assistant to Mr. Manuel. He was an active and diligent member of Council from 1890 to 1893 and a regular attender at the Institute. Mr. Wilson was awarded the Denny Gold Medal for his paper on "Treatment of Marine Boilers," read in Sept., 1892.



REVENUE

Dr.

1st February, 1910, to

	£ s. d.	£ s. d.
To General Expenses :		
Bank Charges	0 19 3	
Postages, etc.	40 16 7	
Telegraphic Address	1 1 0	
Engrossing Certificate	2 2 0	
Stationery and General Printing	31 4 2	
Assistant Secretary's Salary	175 0 0	
Chartered Accountants' Fees	10 10 0	
Telephone	8 10 0	
Council Meeting Room	5 5 0	
Exhibition Expenses. (Including cost of preparing Pictures and Models for Olympia Exhibition and visit to Japan-British Exhibition)	2 19 3	
Expenses visits to Works	0 18 6	
Expenses Presidential Address	1 4 6	
Repairs to Typewriter	2 6 9	
	<hr/>	282 17 0
„ Rates and Taxes, etc. :		
Rates and Taxes	35 12 9	
Gas and Electricity	13 12 11	
Water	3 6 4	
	<hr/>	52 12 0
„ House Account :		
Caretaker	69 14 0	
Coals	8 8 0	
Sundries	5 10 1	
	<hr/>	83 12 1
„ Insurance		3 16 6
„ Repairs, Additions and Alterations		97 19 7
„ Depreciation, Furniture, etc., at Institute		14 17 6
„ Reading Room Expenses		15 16 5
„ Papers and Discussions :		
Printing and Postages	409 3 2	
Hire of Lecture Halls	3 3 0	
	<hr/>	412 6 2
„ Interest :		
Denny Gold Medal Fund	10 0 0	
Stephens' Legacy	2 10 0	
	<hr/>	12 10 0
„ Recreation Section :		
Re-covering Billiard Table, etc.	6 10 11	
Expenses of Tennis Club	0 7 6	
	<hr/>	6 18 5
„ Expenses of Annual Meeting		11 3 3
„ Transactions Section		14 0 0
„ Experimental Department Expenses		0 5 2
„ Lloyd's Register Scholarship Award Expenses		10 19 4
„ Ritchie Award		2 0 0
„ Open Competition Award		2 2 0
„ Balance, carried to Balance Sheet		70 11 11
		<hr/>
		<u>£1,094 7 4</u>

ACCOUNT.

31st January, 1911.

Cr.

					£	s.	d.	£	s.	d.
By Subscriptions :										
Members..	..	..	..	..	924	9	2			
Associate Members	..	..	..	..	41	5	1			
Associates	..	..	..	..	16	6	4			
Graduates	..	..	..	..	9	14	2			
Companions	..	..	..	..	36	14	8			
					<hr/>					
					£1,028	9	5			
„ Less Subscriptions in Advance—										
Members ..	..	..	..	£71	5	4				
Associate Members	..	..	..	1	7	6				
Graduates	..	..	..	0	18	4				
Companions	..	..	..	0	19	3				
					<hr/>					
					74	10	6			
					<hr/>			953	18	11
„ Interest :										
Consols ..	..	..	..	..	22	16	4			
Transvaal Stock	..	..	..	..	5	13	0			
Local Loans	..	..	..	..	14	2	8			
Deposit ..	..	..	..	..	5	14	4			
					<hr/>			48	6	4
„ Further Receipts on Sale of Ball Tickets								1	10	6
„ Donations :										
Mr. Archibald Ritchie (Ritchie Award)	..	..	..	..				2	0	0
Mr. Robert Clarke (Open Competition)	..	..	..	..				2	2	0
„ Transactions Section								14	13	9
„ Advertisements								70	6	0
„ General Revenue :										
National Telephone ..	..	..	..	..	0	5	0			
Billiard Table Receipts	..	..	..	..	1	4	10			
					<hr/>			1	9	10

 £1,094 7 4

C

ANNUAL DINNER (1910) ACCOUNT.

Dr.		<i>£</i>	<i>s.</i>	<i>d.</i>			<i>Cr.</i>	
							<i>£</i>	
							<i>s.</i>	
							<i>d.</i>	
To Expenses .. .. .	..	144	2	7	By Sale of Tickets, 287 at 10/6 each .. .. .	..	150
„ Balance, being Profit, carried to Balance Sheet ..	..	6	10	11			13
							6	
		<u>£150</u>					<u>150</u>	
		<u>13</u>					<u>13</u>	
		<u>6</u>					<u>6</u>	

LIBRARY ACCOUNT.

To Books purchased .. .. .	..	1	11	6	By Donations .. .. .	..	13	
„ Balance, carried to Balance Sheet.. .. .	..	11	14	0			5	
							6	
		<u>£13</u>					<u>13</u>	
		<u>5</u>					<u>5</u>	
		<u>6</u>					<u>6</u>	

95, CANNON STREET,
LONDON, E.C.
21st February, 1911.

To the Members of

THE INSTITUTE OF MARINE ENGINEERS,
58, ROMFORD ROAD, STRATFORD, E.

GENTLEMEN,—

We have to report that we have examined and checked the Accounts of your Institute for the year ended 31st January, 1911.

The Revenue Account shews a Profit of £70 11s. 11d., as against one last year of £106 16s. 9d. To adjust this figure so that it may be comparable with that for this year, there must be added £27 8s. 2d., being the Loss on Ball and Dinner, and £1 10s. 6d., received this year in respect of that year's Ball; and there must be deducted the Donations to Library amounting to £11 4s. 6d., which this year have been taken to a separate Account; so that for comparative purposes the Profit for the year ended 31st January, 1910, must be taken as being £124 10s. 11d., and the decrease this year is, therefore, £53 19s.

The Gross Revenue for the year is £1,074 7s. 4d., as against £1,270 8s. 1d. Last year's figure includes £185 4s., in respect of Ball and Dinner, whereas this year's Account only shews £1 10s. 6d., as the sale of Dinner Tickets has been taken to a separate Account. To institute a comparison between the two years it is, therefore, necessary to deduct £183 13s. 6d., also £11 4s. 6d., Donations to Library, a total of £194 18s.; so that for comparative purposes the Revenue for the year ended 31st January, 1910, must be taken as £1,075 10s. 1d., over which the Revenue for the year ended 31st January, 1911, shews an increase of £18 17s. 3d.—this figure being the difference between the sum of the increases in Subscriptions, Interest and Donations, and the sum of the decreases in Transactions, Advertisements and General Revenue.

The Expenses charged to Revenue Account amount to £1,023 15s. 5d., as compared with £950 19s. 2d. (the difference between the total Expenses for the year ended 31st January, 1910, and £212 12s. 2d., the expenses of Dinner and Ball), being an increase of £72 16s. 3d. The greater part of this amount is caused by the increase of £49 8s. 7d. in the Repairs Account, the remainder being due to the balance between the increases and decreases of various items, none of which amount to as much as £10.

We have obtained all the information and explanations we have required. Sums received on account of the Fund inaugurated for the building of City Premises have not been entered in the books of the Institute; nor has the balance certified by the Bank Manager to be standing to the credit of the City Premises Fund Account of the Institute as at January 31, 1911, been included in the Balance Sheet. We are informed by the Hon. Treasurer of the Fund, that a separate Account of the Fund will be submitted to us for audit, and issued later to the members. In our opinion the Balance Sheet of your Institute has, subject to the exclusion of this Fund, been properly drawn up so as to exhibit a true and correct view of the state of the Institute's affairs according to the best of our information and the explanations given us and as shewn by the books of the Institute.

We have inspected the Title Deeds of the Freehold Property, and have verified the Investments and the Balances at the Bank.

We are, Gentlemen,

Yours truly,

WEST AND DRAKE,
Chartered Accountants.

Mr. A. H. MATHER (Hon. Treasurer): I have very great pleasure in bringing before you the Financial Statement for the session, which shows that the finances of the Institute are kept on a very good level, and that we are working well within the income provided by the members. This year there are one or two points that, perhaps, would bear a little explanation so as to keep a correct comparison with previous years, and I think this difference is best shown by the letter incorporated in the Annual Report, by Messrs. West and Drake, the Chartered Accountants. With your permission I will read this letter, which is printed in the Report.

This letter points to the difference in the ways of keeping the accounts which have been introduced during the course of last session, the principal one being that the accounts for the Annual Dinner do not appear in the general accounts of the Institute, as in previous years. This was done on the suggestion of the Annual Dinner Committee, with a view to presenting a separate account. This implies impropriety and want of legality in former years. We cannot admit that. The balance of this account now appears simply as a sum carried to the Balance Sheet, which shows that instead of a loss, as has generally been the case in previous years, there is this year a credit of £6 10s. 11*d.* This amount is really a reserve, so that in the event of the balance being on the other side on a future occasion, this amount may be drawn upon instead of the Institute funds proper. The question of arrears is generally brought to our notice at the end of the session, and I am very pleased to see that the system introduced some two or three years ago, of sending regular notices, is resulting in increased returns each year. The amount of money outstanding is now much smaller than in previous years, and the amount is lessening year by year. You will notice that the investments of the Institute are gradually increasing. Taking the comparison with the previous year, although we have not transferred any amount to investments this year, we have a much larger amount on deposit at the Bank, and no doubt that will be dealt with by the new Council and invested in the most satisfactory way they can devise. The comparative figures with last year are:

	1911.			1910.		
Cash at Bank,	£69	13	3	.. £215	2	7
On Deposit,	£400	0	0	.. £100	0	0

That money was lying in the current account, gradually accumulating by the inflowing of subscriptions in excess of requirements to such an extent that it had to be put on deposit for the time being in order that it might eventually be transferred to the investment account. The other investments are at the same figure, but the amount will be changed in the course of the coming session. There is one small feature not quite so pleasant, perhaps, in regard to the investments. The amount of investments in Consols was written down some time ago to its then figure of 85. Unfortunately, Consols are not at 85 to-day, but are at 81, so that they are a little overvalued. That, however, is the only point on which there is any shortage. Taking the expenses generally, there are only the small variations which are generally to be found in comparing one year's accounts with another, and I do not think I need call attention to any further item.

Mr. WM. McLAREN : It gives me much pleasure to be entrusted with the duty of proposing the adoption of the Reports. I think the members, having this Report in their hands, will see that the Members of Council are carrying on the work of the Institute in a very efficient manner, and are giving the members "value for money." It is a pleasure to see the increase in membership, which, from the Report, is stated to be about 30 per cent. during the last five years. Of course we are all sorry to see the record of the number of members who have died during the session, but there is still some compensation in the thought that it is not so great as that of last year. Mr. Shearer is still doing good work on the Board of Trade Advisory Committee, and seems to give a good account of the work that has been done by the Committee. It is also very gratifying to read the Report of the Awards Committee. That is a matter which should particularly interest the younger men connected with the Institute, and our thanks are due to those gentlemen who have so kindly put the funds to provide prizes at the disposal of the Council. I see that on the Balance Sheet, for the first time in the history of the Institute, there is an item in regard to the proposed new City Premises, and there was one word in it which caught my attention, the word "recoverable." It occurred to me that if we could use to the full the influence of the President and every member of the Institute, the £20,000 aimed at would be "recoverable" also.

Our Chairman drew attention to the subjects of the various papers that have been dealt with during the session, and I think the Convener of the Papers Committee is to be congratulated in keeping to the front and very much up-to-date, especially in relation to the oil gas and coal gas internal combustion engines. Evidently the Board of Trade are looking upon that type of vessel with a favourable eye, and I hope they will take notice that the Institute of Marine Engineers is not behind in dealing with the subject. These papers are not yet completed for this session, and we have still some little time to deal with the subject. I understand, also, that one of our late Presidents is likely to invite us to a practical demonstration on one of these vessels driven by a marine type of internal combustion engine. I have much pleasure in proposing the adoption of these Reports.

Mr. E. T. LLOYD (Member) : I have much pleasure in seconding the adoption of the Reports. I do it with a certain amount of diffidence, as I am a very junior member of this Institute, and more especially as there are more capable and worthier members present. I esteem it an honour to have been admitted to an Institution where there are gentlemen who number amongst themselves some of the most efficient men of our day, and who are connected with a most important and necessary profession in the advancement of commerce and of almost every industry in the country. On reading through the Report, and noting the results obtained, I would say that the affairs are in very able hands. I am sure the marine engineering profession owes a large debt of gratitude to those gentlemen who are so closely connected with and have given so much of their valuable time and financial support to the furthering of the aims and the carrying on of the business of this Institute. I notice there are 1,229 active members enrolled, fifty-three of whom joined last session. It should be the endeavour of the whole of these members to push a good thing along, and we certainly have, in this Institute, something well worth pushing on. Personally, I hope to see the day when this Institute will be the centre of our profession, and at the same time that we shall, by our force of membership, be able to send our own representative to Parliament. There are many things which could be done to make the marine engineering profession one to be more appreciated in all its bearings. There are a

good many gentlemen in this room to-night who, like myself, have had a number of years' experience at sea. We all know the ups and downs of the life and the thousand and one worries and distractions one has to contend with, and I feel sure all those going to sea have our sympathy, and they should also—I say it emphatically—have our help. This can only be done by co-operation amongst the heads of the profession, to whom the owners of steamships look so much for efficiency and economy. We cannot get the best out of our engineers unless we treat them with every consideration, and help them to educate themselves to modern requirements. We should endeavour to get all those who are worthy to associate themselves with this Institute, and all unite to further in every possible way the education of those who some day may similarly help others later on. I trust I have not trespassed too much on your time, and now formally beg to second the adoption of the Reports.

The motion was put to the meeting and carried unanimously.

Mr. J. T. MILTON : I am sure you must all regret our retiring President is not able to be with us to-night ; but we happened to have fixed a day for our meeting upon which he has to attend what is, to him, a more important meeting, viz., that of the Royal Astronomical Society. Sir David Gill is, as most of you know, a most distinguished astronomer. He has served us well ; he has presided over some of our meetings with very great dignity, and now that the time has come for him to leave our Society as President, we must give him a hearty vote of thanks. He goes now to add his name to a very distinguished list of Past Presidents. We have had exceedingly good fortune in this Institute in having so many eminent men to preside over us, men whose names are known world-wide for the work they have done for the good of humanity. As an instance, Lord Kelvin's name will never be forgotten wherever science is remembered. Sir David Gill has done a most marvellous work for astronomy. Some of us may say : "What connexion has astronomy with marine engineering ?" Directly, little ; indirectly, very much. Sir David Gill's name will always be famous because he has taken the lead in two very able investigations into the distance of the sun from the earth. He dealt with these investigations both in connexion with the planet Mars and the Transit of Venus. When a boy I was

told the distance of the sun from the earth was 95 million miles. Through Sir David Gill's researches this is now found to be $92\frac{1}{2}$ million miles. We use this exact distance as the base of every astronomical observation. We are thus able to correct what is called the horizontal parallax. In every observation by a navigator he has to use some of Sir David Gill's work, and that alone ought to make his name remembered by everybody who has to do with the sea. His term of office expires this evening, and I think you will agree he deserves our thanks for the way he has presided. He has added to our prestige, and I hope he will agree we have added to his. I happened to look up a periodical called *Who's Who*, and I found there amongst the qualifications of Sir David Gill is "President of the Institute of Marine Engineers." I have great pleasure in proposing that we give him a very hearty vote of thanks.

Mr. R. LESLIE, R.N.R. : I have very much pleasure in endorsing what Mr. Milton has said in connection with our late President. We must esteem him as a great friend of the Institute for coming amongst us, and we must also esteem him for the amount of work he has done while in the position of President. He has given the Institute a certain amount of status by his presence in the Chair, and no doubt in the future he will be of great help to us. I know this from Sir David Gill, that he is quite willing to do what he has done in the past to help on the work and make the Institute known, not only to his friends, but to people he knows far and wide. I second the motion with very great pride because we know we can only give honour where honour is due. All our Presidents in the past have been worthy of all honour and I hope the Institute will always maintain its high standing in this respect.

The motion was then put to the meeting and carried with applause.

Mr. JOSEPH HALLETT : I have a great deal of pleasure in proposing a vote of thanks to the Office-bearers and Members of Council of this Institute. It is one of the pleasantest features of social life that we find men ready to devote time, talents and substance to the service of their fellows, and I think we have a very good illustration of that in the Office-bearers and Council of this Institute. The value of their work and the result of their labours is amply demonstrated in the very excellent report

presented to us this evening, and I have very much pleasure in proposing a vote of thanks to them, for they fully deserve it.

Mr. W. E. FARENDEEN : I have very much pleasure in seconding this vote of thanks. I am sure the work and time devoted to the interests of the Institute by the Members of Council must have been very considerable. From the Report submitted to us to-night we find that work has been of a very important character, and we as members are very much indebted to them. In seconding this motion I would like to mention specially the names of the retiring Members of Council, who vacate office this year owing to the alteration in the By-laws. Messrs. John Clark, J. G. Hawthorn, J. McLaren, D. Hulme and W. I. Taylor are those who retire after serving many years on the Council, and who have done, in their various sections, a considerable amount of work for the advancement of the Institute. I have very much pleasure in seconding the vote of thanks.

The motion was duly put to the meeting and carried.

Mr. J. G. HAWTHORN : I do not know why I should be called upon to thank you for the very appreciative way in which you have passed this vote of thanks to the Office-bearers and Members of Council. Speaking for myself, and on behalf of those colleagues who retire with me, it has always been a work of love for us. We have always had the Institute's welfare at heart. Not only have we taken very great pleasure in the work done, but we have always seen with satisfaction the result of our labours. For my own part, I have been a Member of Council for nineteen years out of the twenty-two during which the Institute has been in existence. I have seen the Junior Section grow ; it has been my ambition and delight to see the younger members of the profession coming amongst us. Nothing has been a trouble to me, in the way of giving lectures, in going out on Saturday afternoon visits, and in doing all I could to promote the interests of that section. In the Council, although we deal thoroughly with everything that comes before us, we get through a great deal of work, and I cannot sit down without paying a tribute to the hard work and the fact, indomitable courage and perseverance possessed by our Hon. Secretary, Mr. Adamson. We have all acted as under his guidance. He has the work of the Institute at heart ; he has the Minute Book at his finger ends, and when any point is in question he

will always give you chapter and verse almost. He will say "Turn up January 13, 1907, and I think you will find so-and-so recorded," and he is generally right. It is with a certain amount of regret that I leave the Council, although I think it essential that the Institute should receive fresh blood, and that is one reason why I think the Junior Section so valuable. I have seen it grow until now the Associates and Graduates number ninety-eight, and I may claim a little of the credit for that work in introducing some of the young men. I hope the time will come again when I shall sit at the Council table. We want a rest sometimes, but there is a good deal of work left in me yet. I thank you very much for the way you have accorded this vote of thanks.

Mr. D. HULME : It is a pleasure to me to learn by the remarks of Mr. Hallett and Mr. Farenden that our services have been so well appreciated. I feel confident our successors will serve you as well, perhaps better, and I trust when they retire at the end of their term of office they will have proved the wisdom of your selection. I take this opportunity of thanking Mr. Hallett and Mr. Farenden for their very kind remarks, and the members for their appreciation of our services.

Mr. J. McLAREN : I appreciate the very kind words spoken about the retiring Members of Council, and one thing that is very gratifying is that the retirement of these five Members of Council has taken place at a time when the Institute is in a very flourishing condition. I do not suppose it has ever been in a better. Speaking personally, I have been seven years on the Council, and it has given me very great pleasure indeed to undertake the duties. Some of us have to attend sometimes two nights in a week, and in addition our Hon. Secretary asks "Why do we not come to the reading of the papers?" But I think we have done our best, and if we do that we cannot do more. I am sure, from the names I have seen on the ballot list, that in your selection of new Members of Council you will get some very energetic workers, and I hope they will move forward and leave the Institute in a much more flourishing condition. I thank you again for the kind words spoken about the retiring Members of Council.

Mr. E. W. ROSS : I have much pleasure in proposing a vote of thanks to and the re-election of Messrs. J. Clark and A.

Robertson as Hon. Auditors. These gentlemen have conferred with and inspected the work of, Mr. Mather and myself, and I can speak for the conscientious, thorough and painstaking way in which they have performed the duties of their office.

Mr. W. J. N. BRETT seconded the vote of thanks and reelection, and the motion was carried unanimously.

Mr. J. McLAREN : It affords me very great pleasure to propose a vote of thanks to, and the re-appointment of, our Hon. Solicitor, Mr. W. Archer. I have come in contact with him in the past—although I am not in the habit of consulting solicitors very much—and I think Mr. Mather will bear me out that we have always met with courtesy and kindness at his hands. At all times he has been only too willing to assist with his advice, and although he is never seen at any of our meetings, yet I think he has done very valuable work for the Institute. I think the only thing he has undertaken this year is the question of the repayment of Income Tax, and he went to a great deal of trouble in connexion with it. It gives me great pleasure to propose this vote of thanks and his re-appointment.

Mr. A. H. MATHER : I have much pleasure in seconding Mr. McLaren's motion, and fully endorse what he has said with regard to the courteous manner in which Mr. Archer has conducted any matters that have been put before him. I must say that Mr. Archer is a distinct change from what one usually finds in an honorary solicitor, or honorary official members in any form. Mr. Archer gives an opinion, and does not talk around the subject without giving any definite information. The only matter upon which we consulted him this session was that mentioned at the last Annual Meeting, whether the Institute could not be put upon the same footing as other Institutions with regard to the payment of Income Tax. The Institution of Mechanical Engineers and the Institution of Civil Engineers do not pay this, whereas we do, and Mr. Archer went to a good deal of trouble to find out the reason, and even took it to some of the senior officials of the Inland Revenue. The final decision was that on reading through the Articles of Association of the Institute, the Income Tax officials found we were allowed, by our Articles of Association, to use the Institute in the manner of a club, as well as a technical society,

and on that ground refused to put us on the same footing as the others who had not made provision for a club element. I might make it clear that we do not pay income tax on the subscriptions ; it is simply the income tax on the value of the property we own at Stratford. It is not a very large amount, but the question was brought up by the Hon. Auditors, and we thought it best to have the matter tested. I have much pleasure in seconding the vote of thanks to, and re-appointment of, Mr. W. Archer as Hon. Solicitor.

The motion was then put to the meeting and carried with applause.

CHAIRMAN : The next item on the programme is a very important one from a great many points of view ; that is to say, to give all our members an opportunity of putting forward any recommendation or suggestion which might be of advantage to the Institute. It has always been the practice at our Annual Meetings to leave it open to any member to make any such recommendation, so that if any gentleman would like to comment upon matters in reference to the work of the Institute, we should be pleased if he would take this opportunity.

Mr. W. McLAREN : It seems from the report in reference to the Transactions that there is a quantity of back numbers of the Transactions in stock. I should suggest to the Council that these back numbers should be obtainable by members on application. It might also be a good plan to send on copies of the Transactions, with an invitation to visit the Institute, to engineers of vessels coming into port. I am sure they would be appreciated, as engineers always welcome readable matter of this kind, and perhaps it might have a good result.

Mr. JAS. ADAMSON (Hon. Secretary) : I was glad to hear Mr. McLaren's suggestions, and to some extent they have already been put into practice. A notice is on the back cover of the Transactions to the effect that members may obtain back numbers on application ; and for many years his second suggestion has been carried out ; that is to say various members have taken a number of papers and distributed them in the steamers with which they are associated with a view to letting the Institute's Transactions be known. We have still a stock of old papers, and we will be glad to get rid of them in this

way. We are "glad to get rid of them" in that they may be at least for the benefit of the Institute and for the benefit of those engineers who do not know about the work it is doing. As the Chairman has said, we have always been pleased to receive suggestions, and to carry them into effect if possible. Our one desire is to make the Institute the best possible medium between the marine engineer and the demands of the present day. Things are advancing every week, nay every day, and we desire that every marine engineer should try to keep up with the progress that is being made. I was very pleased to hear the remarks of Mr. Lloyd, and I know it is his aim to reason with every marine engineer he comes in contact with who is not already a member, to convince him that not only should it be his duty, but it will be a privilege if he is elected as a Member of the Institute of Marine Engineers. That, I think, is the spirit which should animate every one, and I think we ought to do our best to advance the best interests of the Institute in every possible way. Some of us may not altogether believe in our social functions. I for my part do so heartily, as I have seen good fruit accruing from them.

Mr. W. E. FARENDEEN : I have conversations at times with sea-going engineers, and they have asked me what the Institute has done for them. They are perhaps a fortnight or so in port, and during that time when they are not at work they have so much to occupy their time that they have no opportunity of coming to the Institute. Of course they receive their papers, but I think it is felt in many instances that the Institute might do something for them in the event of them losing their positions through no fault of their own. That is the idea that a good many engineers have, and I think, as this is an opportunity of discussing matters that affect the Institute, it is just as well to let members know the ideas some engineers have regarding the Institute. They think that if we had some method for assisting them to obtain situations, we should be doing something to help to increase the membership. I would suggest that a book be kept by the Secretary, in which names of members requiring appointments should be recorded, and which could be referred to at any time by Supt. Engineers, and others when requiring men, and that preference should be given to them where possible, so that the Institute would not only be an educational advantage, but also a practical help to the sea-

going members. The fact of this book's existence should be brought prominently before the members.

Mr. D. HULME : I think this Institute is already doing something to assist engineers who are out of work to get situations. The object of the Institute is to educate marine engineers by giving papers and lectures on subjects in connexion with marine engineering, so that our members may be quite up-to-date in regard to all the new things that are being introduced on board ship. That is a great advantage when applying for a position, to be able to adapt oneself to new conditions.

Mr. ADAMSON : I may say we have a means in connexion with the Institute, whereby we keep a list of all members who are out of employment, and there are several companies that regularly ask us if we have any members that we could recommend for certain positions. I can say, from my own personal experience, that the Institute has been largely instrumental in getting members, as well as those outside the membership, friends of members, employment. I am surprised that Mr. Farenden does not know of such means of record and communication for the benefit of members. We have been asked on several occasions to recommend engineers for appointments, and I am also pleased to know that those we have recommended have proved themselves worthy of our recommendation. When I say that, you will understand that sympathy with our members who are out of employment is not lacking, but on the contrary we do everything we possibly can to help in those cases brought before our notice, and such have included also children of deceased members, where help has been required.

Mr. R. BALFOUR : I think there are a good many engineers who, unfortunately, misunderstand the objects of this Institute. There are men who are discharged from their situations through no fault of their own, and it is our duty as members and individuals to help them to obtain other situations if we possibly can, but as an Institute we are guided by our Articles of Association, and if members would read what are the objects of the Institute as stated in those Articles there would be no misunderstanding as to the action of the Institute in matters which are purely personal.

Mr. K. C. BALES : It might be of interest to mention an incident which came under my notice—and I think Mr. Adamson will bear me out in it. As one of the Conveners of the Experimental Department it came to my notice that there was a young man applying for a post. He wrote to the Institute afterwards, and said a deciding factor in obtaining the post was his having attended the experiments given at the Institute in fuel testing.

Mr. P. T. CAMPBELL : I might suggest that a simple solution for a particular person who has had the experience of being out of a situation to look up the list of Members of the Institute given in the Annual Report and write to those members who could be of assistance to them in obtaining employment. What cannot be done by the Institute as a body might be done by individual members.

Mr. J. E. MILTON : I believe I am right in saying that all our papers are read at eight o'clock in the evening. Personally, it is to me a most inconvenient time, and I should think that to other members living at a distance from Stratford eight o'clock cannot be a popular time. I would, therefore, suggest that the Council should consider whether the hour should not be altered to seven o'clock.

Mr. A. ROBERTSON : The previous speaker has referred to a subject on which I was going to make a few remarks. I have noticed the thinness of the gatherings at Stratford for some months past, and I do not think this is satisfactory ; we do not get the best results from the papers read. There must be some cause for it, and it is our duty to look for the cause. The suggestion I would make would be to consider whether it would not be better to have fewer papers, and to have them read either on the first, second or third Monday in the month, letting it be known that a paper would be read each month on a certain specified day. Then no member would have an excuse for saying he did not know a paper was going to be read on that day. As for the discussions, they could be arranged for other evenings, and if members are interested on the reading of the paper they will be present at the discussion, and be prepared to take part in it.

Mr. P. S. DOHERTY : I would like to follow up Mr. Robertson's remarks. I think it would be of great advantage to the

members generally if they could be in receipt of a copy of the paper to be read a few days in advance. We find copies of the paper on the chairs, and it is a difficult matter with some of the papers to both follow the speaker, and at the same time note any remarks one may wish to make.

Mr. WM. McLAREN : May I be allowed to endorse some of the remarks of our Hon Secretary. If the members require copies of the papers in advance, all they have to do is to make application to the Institute for a copy, and it will be sent on to them. I have copies sent to me on many occasions. When on the Council I found there was sometimes a difficulty in getting the MS of the paper in time, but generally it is only necessary to make application or to leave your name and address for proof copies to be sent regularly. For business reasons, I am not able to get to as many meetings as formerly, but the copies have been sent to me, and I am pleased to acknowledge this courtesy. But I do not think we marine engineers should be always asking, "What can I get out of the Institute?" but "What can I put into it?" In these days when there are so many advances in engineering every one can add something of interest for the general good. The intelligence of the members should be put at the disposal of the Institute as a whole, and we cannot but be benefited by associating with better people than ourselves.

Mr. R. LESLIE, R.N.R. : I have been waiting for some time to say a word or two about what is perhaps the most important business of the evening, the City Premises Scheme. I am pleased that some of our friends have been talking about intelligence, because this is a matter upon which intelligence of a certain kind should be applied. Some people do not know the length of their purses, others know the length but do not apply the intelligence. What we want is that kind of intelligence that when applied all round in connexion with the City Premises Fund, will result in a great increase to the already good subscriptions coming in. Up to the present the matter has advanced very well indeed, and I think if the ordinary marine engineers will do their part in supporting the movement, our new City Premises will soon be an accomplished fact. It is a great pleasure to know that a good many friends have subscribed very largely, and in many cases it is also gratifying to re-

cord that fairly good amounts have been received from the junior members. We thank them for the interest they have shown, and hope it will be an example for those who are more able to give. The object we have in front of us is not only the maintenance of the Institute, but the building up and extension of it in membership, intelligence, funds and progress all round, and we cannot do it without financial support, so necessary in matters of this kind. I hope every one here will do their best to influence their fellow engineers in endeavouring to get the funds together for our new premises. It means work, but "willing hands make light labour," and as far as I can see we are not short of willing hands. I may say that one donation which has been promised runs into four figures.

CHAIRMAN : Several members have spoken of what the Institute has done for engineers out of employment. A record is kept of such members, and any application or communication is immediately attended to. It is a valuable feature of the work of the Institute, but of course primarily the Institute exists for mutual improvement in their profession, and to promote good fellowship among marine engineers.

Mr. E. W. ROSS : As the Chairman has said, the business of the Institute is mainly educational, and for this reason I feel that we do not get a large enough attendance at our ordinary meetings. I sometimes stay away because I do not wish to see my own name mentioned so frequently in the discussions ; one sees the same names time after time. There must be some cause for this, which I doubt not can be largely explained by our migratory and distant memberships. If we are mainly educational, if the Transactions form the backbone of the Institute, we ought to get the minds of a great many of our members on the subjects which are put before us, instead of the few only who are regular attenders at the meetings.

Mr. J. McLAREN : I do not think we should lose sight of the fact that ours is a floating membership ; that we have a great many members at out posts as well as London, working nearly night and day. We are not in the same position as any other technical society, and I do not see how we can expect overflowing meetings. Another reason is that when a ship gets into port, the shipowner wants it away again without delay,

and during the short time they are in port the engineers want to see something of their homes.

MR. A. E. SHARP : Mr. McLaren has mentioned that we are a floating membership. I think the aspect of the Institute requires to be amended to suit that membership ; they should, in some respects, be catered for. There was one suggestion I thought might help matters, and that was to have the meetings "sandwiched" in with those of some of the other Institutions. You will notice that at some of the other societies' meetings a certain number of gentlemen come up to town specially for them. Could we not have, say, four meetings a year, and have them at the same time as these other institutions ?

CHAIRMAN : If there are no other recommendations I will now ask the Scrutineers to give their report.

Messrs. J. Robertson and A. E. Sharp then submitted their report as Scrutineers, and the following were declared elected Office-bearers and Members of Council for session 1911-1912 :—

President : The Most Hon. The Marquis of Graham,
C.V.O.

Honorary Treasurer : Mr. A. H. Mather.

Honorary Secretary : Mr. James Adamson.

Members of Council : Messrs. J. Blackett, W. E. Farenden, J. Hallett, W. Veysey Lang and F. M. Timpson.

MR. F. M. TIMPSON : Before we adjourn I would like to propose that we accord a hearty vote of thanks to the Chairman, Mr. Boyle, for the very able and genial manner in which he has presided over the meeting. His opening remarks were very much to the point, and such words coming from him should be the means of inducing many engineers to desire to join the Institute.

MR. A. ROBERTSON : I have very great pleasure in seconding the vote of thanks.

MR. BOYLE : It has always been a pleasure to me to do what I could to promote the welfare of the Institute. As regards what I have said about the advantages of the membership

of this Institute to marine engineers, I shall be glad if my words have a good effect. The aims and purposes for which the Institute was founded, so far as I remember the exact wording of the Articles of Association in which the objects of the Institute are stated, were that the Institute is founded "to maintain and improve the status of marine engineers and to promote their progressive advancement in a knowledge of their profession," and it is highly desirable in every way this fact should be known to every marine engineer. The prosperity of England depends upon her commerce; the prosperity of commerce depends to a large extent on the shipping, and the principal man on the ship who can effect economies is the engineer. There is little doubt that the country which can hold its own in the carrying trade of the world is the country which will come out near the top. We have examples in history of countries which have been foremost in the carrying trade in their day, and as long as they retained that position they held their place among the leading nations of the world. So I advocate that for national as well as personal interests the Institute should be supported by all marine engineers. There are two instincts implanted in our minds, the love of country and concern for the welfare of the people one is associated with, and in this Institute those instincts find expression. I have had a long experience of engineering, and I have found that the successful engineer is not always the man who had the best start in life, but the man who, in whatever station he was placed, had the determination to succeed, and the perseverance to keep on trying to improve, and to make the best of what he had to do with. It is to these men that we owe the changes and improvements in marine engineers that have been brought about during the last thirty or forty years. Forty or perhaps forty-five years ago the pressures were, as a rule, about 25 lbs. per square inch; then the compound engines came with pressures of 60 lbs. gradually increasing to 90 lbs.; then the triple expansion engine held the field for many years together with the quadruple expansion. The turbine has made great strides during the last few years, and to-day we have the whole engineering practice proposed to be revolutionized by the advent of the internal combustion engine in various forms, each claiming a large measure of economy over the steam engine. It is therefore essential that the marine engineer should be fully acquainted with what is proposed in the

engineering world, and by joining the Institute he has the opportunity of hearing or reading about the latest ideas or experiments in the propulsion of ships—information which is important, and even necessary for every engineer to know, who is anxious to keep himself abreast of the times. Gentlemen, I will not detain you longer. I thank you very much for your hearty vote of thanks, which I highly appreciate, and I also thank Messrs. Timpson and Robertson for so kindly proposing the same.

The meeting then closed.

